

US 23 Middle Bridge  
Spanning Levisa Fork  
Pikeville  
Pike County  
Kentucky

HAER No. KY-5

HAER  
KY  
98-PIKVI,  
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
National Park Service  
Southeast Region  
Department of the Interior  
Atlanta, Georgia 30303

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HISTORIC AMERICAN ENGINEERING RECORD

US 23 Middle Bridge, Pike County

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Location: Spanning recently abandoned bed of Levisa  
Fork in Pikeville, Pike County, Kentucky  
UTM: 17-365980-4148960  
QUAD:

Date of Construction: 1908

Present Owner: Kentucky Transportation Cabinet  
State Office Building  
Frankfort, Kentucky 40622

Present Use: Vehicular Bridge on US 23

Significance: Rare Eastern Kentucky example of pin-  
connected parker truss and multi-span  
structure. One span constructed by  
Champion Bridge Company of Wilmington,  
Ohio

Historian: Gregory D. Rawlings

US 23 MIDDLE BRIDGE, PIKE COUNTY

The US 23 Middle Bridge over the abandoned course of Levisa Fork in Pike County has been determined eligible to the National Register of Historic Places (9/30/82). The US 23 Middle Bridge is an early Eastern Kentucky pin-connected Pratt through and parker truss. At least one span of this multi-span structure was built by the Champion Bridge Company of Wilmington, Ohio, in 1908.

This one-lane metal truss bridge is located in Pikeville in far Eastern Kentucky. It crosses the Levisa Fork, which has been diverted around Pikeville to allow development of additional flat terrain and provide flood protection. The structure is badly deteriorated and is posted at a 3 ton safe load limit.

The US 23 Middle Bridge is a three span crossing with an overall length of 448 feet and a roadway width of 16 feet. Each truss has concrete abutments and piers. The floor systems are rolled I-beam floor beams and stringers with an asphalt deck. A wooden sidewalk provides pedestrian passage over Levisa Fork.

The main center span on the US 23 Middle Bridge is a pin-connected parker truss. A parker truss is a Pratt through truss with a polygonal top chord of more than five slopes. This 11 panel truss is 200 feet in length and has no identifying builder/date plate. End posts and top chords are 2 channels, cover plate and lacing bars. Intermediate posts are 2 channels and 2 sets of lacing bars. Bottom chords are paired angles and stay

bars in the first two panels and 2 or 4 rectilinear loop-welded eyebars. The hip-verticals are paired angles with stay bars. Diagonals are 2 rectilinear loop-welded eyebars (some with stirrup rods for additional strength) or 2 square loop-welded eyebars with turnbuckles in the center panel. Counters are single square loop-welded eyebars with turnbuckles. Top and bottom lateral bracing are single round rods. Top lateral struts are paired angles with lacing bars.

The 140 foot east truss of the US 23 Middle Bridge was built by the Champion Bridge Company of Wilmington, Ohio, in 1908. It has end posts and top chords of 2 channels, cover plate, and lacing bars. Intermediate posts are 2 channels and 2 sets of lacing bars. Bottom chords are 2 rectilinear loop-welded eyebars. Diagonals are also 2 rectilinear loop-welded eyebars that are smaller on panels near the center of the span. Counters are single round stirrup rods, added later as a maintenance measure. Top and bottom lateral bracing are single round rods. Top lateral struts are paired angles and lacing bars. Paired angles are utilized as knee bracing at intermediate posts.

The west end truss of the US 23 Middle Bridge is 105 feet long and has no identifying builder/date plate. This truss has apparently been shortened as one hip-vertical is constructed as an intermediate post. The end posts and top chords are 2 channels, cover plate, and lacing bars. The intermediate posts are 2 channels and 2 sets of lacing bars. Bottom chords are 2 rectilinear

loop-welded eyebars. The single hip-vertical (at the east end post) is 2 rectilinear loop-welded eyebars with a stirrup rod added. The other hip-vertical is an intermediate post. Diagonals are 2 rectilinear loop-welded eyebars. Counters are 2 rectilinear loop-welded eyebars with a stirrup rod. Top and bottom lateral bracing are single round rods. Top lateral struts are paired angles with lacing bars.

The "Survey of Truss, Suspension and Arch Bridges in Kentucky" completed in January, 1982, located 33 parker trusses in the state. In Kentucky, the parker truss was constructed between 1905 and 1940. Most of the 33 examples were built between 1922 and 1936 by the Kentucky Department of Highways. During this period, few pin-connected trusses were being constructed and 88% of the parker trusses in Kentucky use rivited connections. The US 23 Middle Bridge is one of four pin-connected examples in the state.

Only the eastern span of the 3 span US 23 Middle Bridge is identified by builder/date plate. Although no records have been discovered it appears that the crossing was built around 1908 with 2 new spans (one from the Champion Bridge Company) and one cut down span that was either new or moved to this location.

Although in poor physical condition, the US 23 Middle Bridge in Pikeville retains its structural integrity. This National Register structure is a rare example of a multi-span pin-connected parker truss in the eastern portion of Kentucky.